KENWOOD

Listen to the Future

ADVANCED WIRELESS COMMUNICATIONS

TK-7180(H)/8180(H)

VHF/UHF FM Mobile Radios

FleetSync®

GENERAL FEATURES

- 30/50 W (136-174 MHz)
- 30/45 W (450-520, 400-470 MHz)
- Conventional & LTR® Zones
- MPT1327 Trunking Option
- Remote Control Head Option[1]
- 12 Character Alphanumeric Aliases
- Backlit Dot Matrix LCD
- 3-Digit Sub-Display
- Function / Status LCD Icons
- RSSI Indicator
- Date & 12/24 Hour Time Clock
- Transmit / Busy / Call Alert / Warn LED
- 6 Backlit PF Keys
- Emergency / AUX Key
- Enhanced Kenwood Audio
- Front Panel Speaker
- Companded Audio
- Voice Inversion Scrambler Built-in
- Easy Option Port
- Encryption / ANI Board Control
- VGS-1 Voice Guide / Storage Option
- Emergency Call Features
- DTMF Encode / Decode[2]
- Special Alert Tone Patterns[3]
- Call Key[4]
- Time Out Timer
- Busy Channel Lockout
- Timed Power Off
- DB-25 Accessory Connenctor[5]
- 9 Programmable AUX I/Os[5]
- 2 Programmable AUX Outputs[5]
- Ignition Sense[6]
- Public Address / Horn Alert Option[7]
- MIL-Spec Standard Mic
- MIL-Spec 12-Key DTMF Mic Option
- Windows® Programming & Tuning[8]
- Windows® Firmware Uploading[8]
- Front Panel Test / Tune
- Cloning
- MIL-STD-810 C/D/E/F
- MIL-STD "Driven-Rain"[9]
- IP-54/55 Water & Dust Intrusion[9]

CONVENTIONAL ZONES

- 512 Channels / 128 Zones[10]
- QT / DQT
- Two-Tone Decode[11]
- Single / Two-Tone Encode[11]
- Operator Selectable Tone[11]
- Dual Priority Scan
- Single & Multi-Zone Scan
- List Scan

TRUNKED ZONES

- 512 GID / 128 Zones[10]
- Kenwood LTR® Features[12]

FleetSync®

- FleetSync® or FleetSync® II[13]
- PTT ID Digital ANI
- Selective Call & Group Call
- Status Messaging
- Emergency Status
- Caller ID Display
- Short & Long Text Messages[14]
- Power On/Off Status Messages
- Input / Output Status Messages
- FleetSync® GPS Ready[15]
- Send GPS PF Key[15]
- PTT ID & Emergency GPS Reporting[15]
- Status Message Block GPS Reporting[15]
- Ignition On/Off GPS Reporting[6, 15]
- VGS-1 GPS Data Storage[15,16]
- PC Serial Interface

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Options

- **KMC-35** Microphone (supplied microphone)
- **KMC-36** Keypad Microphone
- **KMC-9C** Control Station Desktop Microphone
- **KRK-10** Control Head Remote Kit (23ft/7m)
- **KCT-46** Ignition Sense Cable
- **KCT-40** Radio Interface Cable (for KDS-100, KGP-2A/2B)
- **KCT-23M** DC Cable (Dash mount / 10 feet)
- **KCT-23M3** DC Cable (Remote mount / 23 feet)
- **KAP-2** Horn Alert/Public Address Relay Unit
- **VGS-1** Voice Guide & Storage Unit
- **KES-3** External Speaker
- **KES-S** External Speaker (requires KAP-2)
- **KMB-10** Key Lock Adapter
- **KLF-2** Line Noise Filter
- **KPS-10A** DC Power Supply
- **KPS-15** DC Power Supply
- **KDS-100** Mobile Data Terminal
- **KGP-2A/2B** GPS Receiver / Modem Unit (GPS-2A, GPS-2B)

All accessories and options may not be available in all markets.
Contact an authorized Kenwood dealer for details and complete list of all accessories and options.

Specifications

Model	TK-7180	TK-7180H	TK-8180	TK-8180H
GENERAL				
Frequency Range				
Type 1	136~174 MHz		450~520 MHz	450~512 MHz
Type 2	–		400~470 MHz	
Number of Channels*				
Zone	Max.128 per Radio			
Ch/GID	Max.250 per Zones			
	(Max.512 [Conv.Ch's +GID's] total per Radio)			
Channel Spacing				
Wide	25 kHz, 30 kHz		25 kHz	
Narrow	12.5 kHz, 15 kHz		12.5 kHz	
Operating Voltage	13.6 V DC±15 %			
Current Drain				
Standby	0.4 A	0.4 A	0.4 A	0.4 A
Receive	1.0 A	1.0 A	1.0 A	1.0 A
Transmit	9.0 A	13.0 A	9.0 A	13.0 A
Duty Cycle	Transmit: 20 %			
Operating Temperature Range	-22 °F ~ +140 °F (-30 °C ~ +60 °C)			
Frequency Stability	±0.00025 % (-22 °F ~ +140 °F)			
Antenna Impedance	50 Ω			
Channel Frequency Spread				
Type 1	38 MHz		70 MHz	
Type 2	–		70 MHz	
Dimensions (W x H x D), Projections not included	6-5/16" x 1-3/4" x 6-3/16" (160 mm x 45 mm x 157 mm)			
Weight (net)	3.3 lbs. (1.5 kg)			
FCC ID				
Type 1	K4437303110	K4437303210	K4437313110	K4437313210
Type 2–	–	–	K4437313120	K4437313220
IC Certification				
Type 1	282F-37303110	–	–	–
Type 2–	–	–	282F-37313120	–

Maximum capability depends on the number of programmed Zone and repeater channels.

Model	TK-7180	TK-7180H	TK-8180	TK-8180H
RECEIVER (Measurements made per EIA/TIA-603)				
Sensitivity (12dB SINAD)				
Wide	0.25 µV			
Narrow	0.28 µV			
Selectivity**				
Wide	80 dB		80 dB	
Narrow	70 dB		67 dB	
Intermodulation Distortion				
Wide/Narrow	75 dB (±50, 100 kHz)			
Spurious Response**	90 dB		85 dB	
Audio Output (4 Ω Impedance)	4 W with less than 5 % distortion			
TRANSMITTER (Measurements made per EIA/TIA-603)				
RF Output Power				
Type 1	30 to 1 W	50 to 10 W	30 to 1 W (490-520 MHz:25 to 1 W)	45 to 10 W (490-512 MHz:40 to 10 W)
Type 2	–	–	30 to 1 W	45 to 10 W
Spurious Response	70 dB			
Type of Emission				
Wide	16K0F3E			
Narrow	11K0F3E			
FM Hum & Noise				
Wide	50 dB			
Narrow	45 dB			
Microphone Impedance	600 Ω			
Audio Distortion				
Wide/Narrow	3 %			

*** Typical specifications*

Kenwood follows a policy of continuous advancement in development. For this reason specifications may be changed without notice.

FleetSync® is a registered trademark of Kenwood Corporation.
LTR® is a registered trademark of Transcrypt International.

Applicable MIL-STD & IP

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures
Low Pressure	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II
High Temperature	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II
Low Temperature	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II
Temperature Shock	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II
Solar Radiation	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I
Rain	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III
Humidity	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	507.4
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4
Dust	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III
Vibration	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I
Shock	516.2/Procedure I, II, III, V	516.3/Procedure I, IV, V	516.4/Procedure I, IV, V	516.5/Procedure I, IV, V
International Protection Standard				
Dust & Water Protection	IP54: Radio itself IP54/55: Remote Head with KRK-10			

**To meet above Mil810 and IP grade, weather proof microphone KMC-35 or KMC-36 has to be connected.*

footnotes from Front:

1. *KRK-10 remote control kit required.*
2. *DTMF includes PTT ID, Emergency ANI, Manual Encode (KMC-36), Auto-Dial (9 numbers) & Stun.*
3. *Special Alert Tone Patterns operate for 2-Tone, DTMF, FleetSync® selective call decode.*
4. *Call Key: 6 keys max.; operates for 2-Tone, DTMF and FleetSync status encode.*
5. *DB-25 ACC supports 15 Remote Zone/CH/GID selections, KGP-2A/B (KCT-40 required), KDS-100 (KCT-40 required), data modem, MDT, interconnect.*
6. *KCT-46 ignition sense cable option required; plugs into mobile ignition sense pig-tail cable.*
7. *KAP-2 required: Horn Alert operates for FleetSync®, 2-Tone or DTMF selective call decode.*
8. *KPG-89D required: Windows®98/ NT/ 2000/ Me/XP compatible; English/Spanish screen languages.*
9. *MIL-STD "Driven-Rain" and IP-55 Water/Dust intrusion apply to remote control head only; IP54 applies to radio chassis.*
10. *Conventional Zones: 512 Channels /128 Zones max. per radio; 250 CH max. per Zone Trunked Zones: 512 GID / 128 Zones max. per radio; 250 GID max. per Zone.*
11. *Two-Tone Decode (4 sets x 4 pairs each); Single / Two-Tone Encode (32 tones), Operator Selectable Tone (40 QT/DQT code pairs).*
12. *Kenwood LTR® Features include: GID Delete/Add, LTR® Talk Around /Scan Revert Group Display, System Scan, Group Scan, Auto Search.*
13. *FleetSync® & FleetSync® II are not compatible.*
14. *Short Text Messages are radio stored & LCD displayed; Long Text Messages require a KDS-100 and KCT-40.*
15. *FleetSync® GPS features require an internal GPS board or externally wired GPS receiver with NMEA TTL level serial data output to the internal COM 1 or 2 set to "GPS".*
16. *Requires a VGS-1 option.*

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